AMENDMENT TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently amended) A transceiver, comprising:

a transceiver port for receiving and transmitting high data rate communication signals at radio frequency;

automatic frequency control circuitry ~~operably disposed to receive communication signals received at radio frequency, the automatic frequency control circuitry~~ for adjusting a local oscillation frequency based upon a detected difference between an actual frequency of the received communication signals and an expected frequency of the received communication signals wherein the automatic frequency control circuitry produces an adjusted local oscillation;

down conversion circuitry to receive the adjusted local oscillation from the automatic frequency control circuitry and further coupled to receive the communication signals at radio frequency wherein the down conversion circuitry is operable to produce base band frequency communication signals based upon the adjusted local oscillation and upon the received communication signals at radio frequency;

low pass filtering circuitry coupled to receive the base band frequency signals from the down conversion circuitry, the low pass filtering circuitry for removing a DC offset and low frequency interference to produce low-pass filtered communication signals;

high pass filtering circuitry coupled to receive the low-pass filtered communication signals, the high pass filtering circuitry for filtering interference signals that are at a

frequency range that is higher than a specified frequency channel of a down converted base band channel;

first received signal strength indication circuit for measuring power levels of signal and interference from a node disposed up-stream of the low pass filtering circuitry; and

second received signal strength indication circuit for measuring signal power levels from a node disposed down-stream of the low pass filtering circuitry; and

variable gain amplification circuitry operably disposed down-stream of the low pass filtering circuitry, the variable gain amplification circuitry for amplifying in varying amounts that are reciprocally adjusted in relation to adjustments in amplification of low noise amplification circuitry operably disposed to receive and amplify ~~in-going~~ received communication signals.

2. (Original) The transceiver of claim 1 wherein the automatic frequency control circuitry comprises signal generation circuitry that provides phase shift keyed signals.

3. (Original) The transceiver of claim 2 wherein the phase shift keyed signal generation circuitry comprises quadrature phase shift keyed signal generation circuitry.

4. (Previously presented) The transceiver of claim 1 wherein the automatic frequency control circuitry is coupled to transceiver port and is operable to adjust the local oscillation frequency to a desired radio frequency (RF) channel.

5. (Original) The transceiver of claim 1 wherein the high pass filtering circuitry and variable gain amplification circuitry are combined to form high pass variable gain amplifier circuit.

6. (Previously presented) The transceiver of claim 1 further comprises an up converter for converting base band signals to radio frequency (RF) signals for transmission from the transceiver.

7. (Previously presented) The transceiver of claim 1 further including resistive capacitive (RC) calibration circuitry to automatically tune the on-chip channel selection low pass filters.

8. (Currently amended) A transceiver, comprising;

a transceiver port for receiving and transmitting radio frequency communication signals;

an automatic frequency control circuit for adjusting a local oscillation (LO) based upon the center frequency of a received radio frequency (RF) signal;

mixing circuitry for down converting the received RF signal based upon the adjusted LO; ~~and~~

low pass filtering circuitry disposed downstream of the mixing circuitry for low-pass filtering signals in a receive circuit path;

first received signal strength indication circuit for measuring power levels of signal and interference from a node disposed up-stream of low pass filtering circuitry;

second received signal strength indication circuit for measuring signal power levels from a node disposed down-stream of the low pass filtering circuitry; and

circuitry for removing a direct current (DC) offset and low frequency interference from signals in the received circuit path.

9. (Original) The transceiver of claim 8 further including dual received signal indication circuits, which dual received signal indicator circuits are for measuring received signal power and received signal and interference power.

10. (Original) The transceiver of claim 8 further including high pass variable gain amplification circuitry.

11. (Original) The transceiver of claim 10 further including a second high pass variable gain amplifier circuit.

12. (Original) The transceiver of claim 11 further including a third high pass variable gain amplifier circuit.

13. (Original) The transceiver of claim 8 wherein the automatic frequency control circuitry includes quadrature phase shift keyed signal generation circuitry.

14. (Previously presented) The transceiver of claim 8 wherein the automatic frequency control circuitry receives base band quadrature signals and produces an adjusted local oscillation (LO) signal output from a local oscillator.

15. (Previously presented) The transceiver of claim 8 further including filter circuitry for removing the DC offset.

16. (Original) The transceiver of claim 8 further including filter circuitry for removing low frequency interference.

17. (Original) The transceiver of claim 8 further including an up converter for up converting base band signals to radio frequency signals for transmission from the transceiver port.

18. (Previously presented) The transceiver of claim 8 further including resistive capacitive (RC) calibration circuitry for automatically tuning the on chip filters.

19. (Previously presented) A method in a high data rate communication transceiver comprising:

receiving and amplifying wideband ~~or~~ high data rate radio frequency (RF) communication signals;

adjusting a local oscillation (LO) frequency to compensate for a difference in a received frequency and an expected frequency of the received high data rate RF communication signals;

down converting the received signals from RF to base band frequency; ~~and~~

applying the down converted base band frequency signals to low pass filters and amplifiers;

measuring power levels of signal and interference from a node disposed up-stream of low pass filtering circuitry; and

measuring signal power levels from a node disposed down-stream of the low pass filtering circuitry.

20. (Previously presented) The method of claim 19 wherein the applying step removes the direct current (DC) offset.

21. (Original) The method of claim 19 wherein the applying step removes low frequency interference.

22. (Original) The method of claim 19 further including the step of sensing the power level of the received signals.

23. (Previously presented) The method of claim 19 further including the step of sensing a power level of received signals and interference.

24. (Original) The method of claim 19 further including the step of setting a first amplification level based upon a ratio of signal-to-signal and interference power levels.

25. (Previously presented) The method of claim 24 further including the step of setting a second amplification level based upon a ratio of signal to signal plus interference power levels.

26. (Previously presented) The method of claim 25 wherein the first and second amplification levels, when summed, provide a constant amount of amount of amplification.

27. (Previously presented) The method of claim 19 further including the step of receiving center channel frequency information from a pilot signal and determining a difference between the received RF frequency and the expected frequency.

28. (Original) The method of claim 27 wherein the difference is determined by measuring an actual center frequency for the received signal.

29. (Currently amended) A transceiver, comprising:

frequency control circuitry operable to compensate for a detected difference between an actual frequency of the received communication signals and an expected frequency of the received communication signal;

filtering circuitry; ~~and~~

low pass filtering circuitry disposed downstream of the mixing circuitry for low-pass filtering signals in a receive circuit path;

first received signal strength indication circuit for measuring power levels of signal and interference from a node disposed up-stream of low pass filtering circuitry;

second received signal strength indication circuit for measuring signal power levels from a node disposed down-stream of the low pass filtering circuitry; and

multiple high pass variable gain amplifier circuits coupled to receive the output of the filtering circuitry wherein the filtering circuitry removes low frequency interference and a direct current (DC) offset and wherein the high pass variable gain amplification circuits provide signal amplification.

30. (Original) The transceiver of claim 29 wherein the frequency control circuitry includes circuitry for measuring a center channel frequency and for determining a difference between the measured center channel frequency and a specified center channel frequency.

31. (Original) The transceiver of claim 29 further including signal generation circuitry for generating quadrature phase shift keyed signals.

32. (Original) The transceiver of claim 29 further including a mixer for producing local oscillator output signals at a specified frequency